

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims:

1. (currently amended) A portable electronic device with power failure recovery, powered by a main power source, comprising:

a power detection module, detecting an output characteristic from the main power source, for asserting an interrupt signal if the detected output characteristic is below a first threshold value;

a processor, responsive to the interrupt signal, for asserting a turn-off signal and an enable signal;

a timing unit, responsive to the enable signal, for asserting a notification signal at a predetermined time interval when the enable signal is asserted, wherein the timing unit is directly powered by a backup power source; and

a power management unit, electrically coupled to the main power source and the backup power source, for disconnecting the main power source ~~to~~ from a circuit block ~~with high power consumption~~ when the turn-off signal is asserted, and for reconnecting the main power source to the circuit block ~~with high power consumption~~ when the notification signal is asserted and the output characteristic of the main power source is beyond a second threshold value.

2. (original) The portable electronic device as recited in claim 1 further comprising a volatile RAM powered by the backup power source, wherein the volatile memory stores operation data when the power failure in the main power source occurs.

3. (original) The portable electronic device as recited in claim 2 wherein the processor performs a resume operation based on the operation data stored in the volatile memory when the main power source is reconnected by the power

management unit.

4. (original) The portable electronic device as recited in claim 1 wherein the timing unit further includes a clock for keeping track of ongoing time and date.

5. (original) The portable electronic device as recited in claim 1 wherein the backup power source is charged by the main power source when the output characteristic of the main power source is beyond the second threshold value.

6. (original) The portable electronic device as recited in claim 1 wherein the backup power source is charged by the power management unit when the output characteristic of the main power source is beyond the second threshold value.

7. (original) The portable electronic device as recited in claim 1 wherein the main power source is a removable battery.

8. (original) The portable electronic device as recited in claim 1 wherein the backup power source is a built-in battery.

9. (original) The portable electronic device as recited in claim 1 wherein the backup power source is a large charged capacitor.

10. (original) The portable electronic device as recited in claim 1 wherein the first threshold value and the second threshold value are the same.

11. (currently amended) The portable electronic device as recited in claim 1 wherein the circuit block ~~with high power consumption~~ includes the processor, a radio part and at least an input/output device.

12. (original) The portable electronic device as recited in claim 3 wherein the volatile RAM is a static RAM with low power consumption.

13. (currently amended) A portable electronic device with power failure recovery, powered by a main power source, comprising:

a power detection module, detecting an output characteristic from the main power source, for asserting an interrupt signal when a power failure in the main power source occurs and the detected output characteristic is below a first threshold value;

a volatile RAM, for storing operation data when the power failure in the main power source occurs;

a processor, responsive to the interrupt signal, for asserting a turn-off signal and an enable signal;

a timing unit, responsive to the enable signal, for asserting a notification signal at a predetermined time interval when the enable signal is asserted; and

a power management unit, electrically coupled to the main power source and a backup power source, power supplying the timing unit and the volatile RAM from the backup power source, for disconnecting the main power source ~~to~~ from a circuit block ~~with high power consumption~~ when the turn-off signal is asserted, and for reconnecting the main power source to the circuit block ~~with high power consumption~~ when the notification signal is asserted and the output characteristic of the main power source is beyond a second threshold value;

wherein the processor performs a resume operation based on the operation data stored in the volatile memory when the main power source is reconnected.

14. (original) The portable electronic device as recited in claim 13 wherein the timing unit further includes a clock for keeping track of ongoing time and date.

15. (original) The portable electronic device as recited in claim 13 wherein the backup power source is charged by the main power source when the output characteristic of the main power source is beyond the second threshold value.

16. (original) The portable electronic device as recited in claim 13 wherein the backup power source is charged by the power management unit when the output

characteristic of the main power source is beyond the second threshold value.

17. (original) The portable electronic device as recited in claim 13 wherein the first threshold value and the second threshold value are the same.

18. (currently amended) The portable electronic device as recited in claim 13 wherein the circuit block ~~with high power consumption~~ includes the processor, a radio part and at least an input/output device.

19. (original) The portable electronic device as recited in claim 13 wherein the volatile RAM is a static RAM with low power consumption.

20. (currently amended) A method for an ~~portable~~ electronic device recovering from a power failure in a main power source, the electronic device comprising a circuit block, a power detection module, a timing unit, a main power source and a backup power source, wherein the main power source is selectively coupled to the circuit block, the power detection module is coupled to the main power source, and the timing unit is coupled to the backup power source, the method comprising:

~~detecting a output characteristic of the main power source;~~

disconnecting the main power source ~~to a~~ from the circuit block ~~with high power consumption~~ when ~~an the detected~~ output characteristic detected by the power detection module is below a first threshold value;

detecting the output characteristic of the main power source with the power detection module in response to a notification signal asserted from ~~a~~ the timing unit at a predetermined time interval; and

reconnecting the main power source to the circuit block ~~with high power consumption~~ when the ~~detected~~ output characteristic detected by the power detection module is beyond a second threshold value.

21. (new) The portable electronic device of claim 1, wherein the circuit block consumes the majority of power of the portable electronic device.